



MISSOURI DEPARTMENT OF LABOR & INDUSTRIAL RELATIONS  
**FIGHTING THE OPIOID EPIDEMIC**

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# Agenda

- Understanding Opioids
- Opioid Overdose: Physiology and Risk Factors
- Opioid Overdose: Signs and Symptoms
- Responding to an Overdose
- Getting Naloxone at a Pharmacy

# Opioids

## Opiates:

Opium

Morphine

Codeine

## Semi-Synthetic

Heroin

Hydrocodone

Hydromorphone

Oxycodone

Oxymorphone

Buprenorphine

## Synthetic








Fentanyl

Methadone

Tramadol



# Opioids Differ

Drug	Duration	Potency
Methadone	24-32 hours	
Heroin	6-8 hours	
Oxycontin	3-6 hours	
Codeine	3-4 hours	
Demerol	2-4 hours	
Morphine	3-6 hours	
Fentanyl	2-4 hours	

# How Opioids Are Used

- Ingested – pills that are swallowed
- Snorted – heroin or crushed pills
- Smoked – opium or heroin
- Injected – heroin or crushed pills

# Signs of Opioid Use

- Sedation, sleepiness
- Slurred speech
- Euphoria
- Respiratory depression
- Small pupils
- Nausea, vomiting
- Itching, flushing
- Constipation



# Consequences of Opioid Use

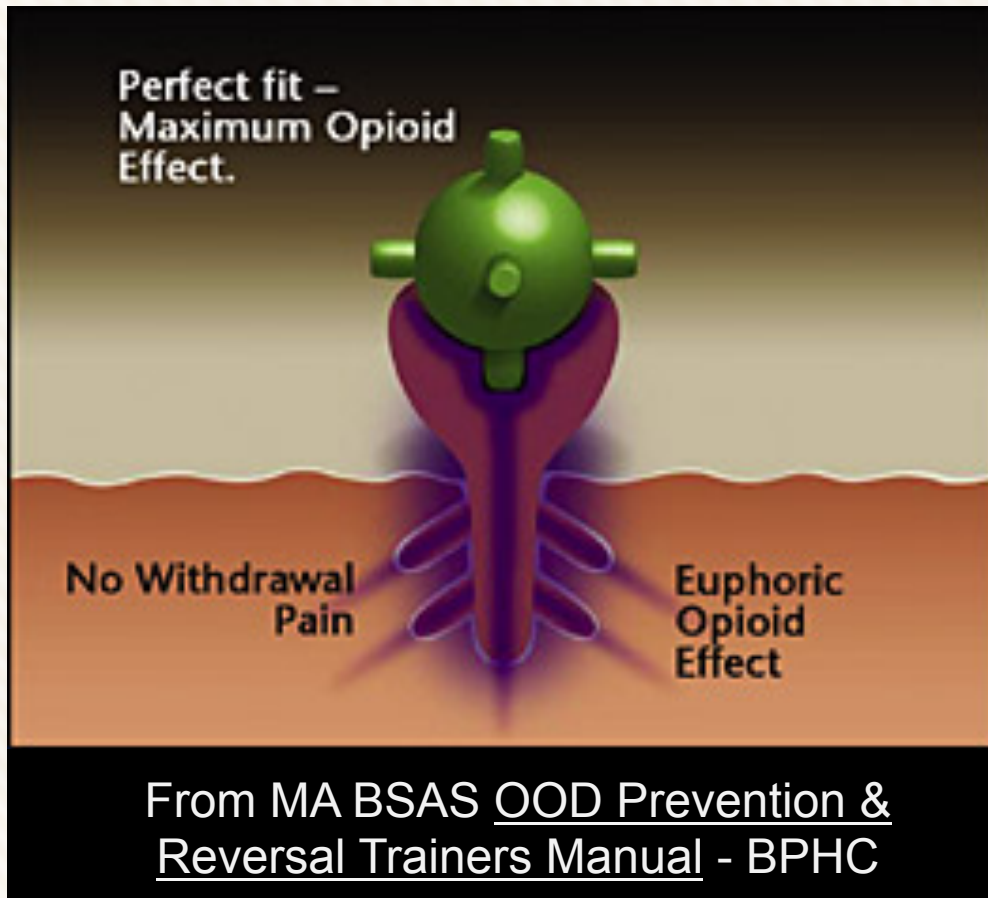
- **Increased tolerance** - need for increased amount of opioids for the same effect
- **Dependence** - the experience of withdrawal symptoms when opioids are stopped
- **Progression**, as a result of increased tolerance and dependence, to more potent opioids and methods of administration

# Opioid Withdrawal Symptoms

- Muscle and joint pain
- Runny nose and eyes
- Nausea, vomiting, abdominal cramps, diarrhea
- Goosebumps, chills, sweating
- Anxiety, depression, intense craving
- Loss of appetite
- Confusion, irritability



# Opioid Receptors in the Brain



Opiates fit perfectly in opioid receptors throughout the brain.

# Distinguishing Intoxication from Overdose

Intoxication	OVERDOSE
Muscles become relaxed	Deep snoring or gurgling (death rattle)
Speech is slowed/slurred	Very infrequent or no breathing
Sleepy looking	Pale, clammy skin
Nodding	<b>Heavy</b> nod, not responsive to stimulation
Will respond to stimulation like yelling, sternal rub, pinching, etc.	Slow heart beat/pulse

# When Overdoses Typically Happen

- Depending on the opioid, an overdose may happen within minutes or hours
- Or may happen quickly when fentanyl is involved
- After periods of abstinence (For example, after treatment stay, hospitalization or incarceration)
- New dealer
- New route of administration



# Top Overdose Risk Factors

- Misjudging body tolerance (relapse after period of abstinence)
- Using an opioid with other depressants such as alcohol or benzodiazepines increases the risk
- Variation of substance
- Using drugs when alone
- Mixing drugs and alcohol
- Poor physical health
- Cocaine/methamphetamine are stimulants but can contribute to overdose risk when used in combination with opioids

# What are Benzodiazepines?

- Class of prescription drugs that depress central nervous system and commonly used to treat anxiety and insomnia and alcohol detox
- Benzos are often used in combination with opioids
- Commonly used benzodiazepines are Xanax, Klonopin, Ativan, Valium, Librium that are diverted or sold illegally

# Signs of an Overdose

- Bluish or grayish tint to the skin and lips
- Cold, clammy skin
- Shallow breath, infrequent breath or no breath
- Deep snoring or gurgling
- Not responsive to loud sound or other stimuli, such as a sternal rub
- Slow heart beat or pulse



# Overdose: Most Critical Signs

- Unresponsive and unconscious
- Breathing is slow or has stopped

# Responding to an Overdose

- Call 911
- Rescue breathing
- Administer naloxone
- Stay with person
- Recovery position

# Calling 911

- Call 911
- Say, “*My friend is unconscious or not breathing*”
- Give exact location
- Emergency response may differ by community
- Stay with the person until help arrives



# Rescue Breathing

Make sure there is  
nothing in the mouth

Tilt head back, lift chin,  
pinch nose

Give a breath every  
5 seconds.



# Rescue Breathing

- Essential for getting oxygen into the lungs
- The air we exhale has only 4-5% less oxygen than the air we inhale
- We may be able to help a person get enough oxygen until the naloxone reverses the overdose
- It help keep someone alive and avoid brain damage

# Recovery Position

If you must leave the person who is overdosing, put them into the recovery position so they won't choke on their own vomit.





# Recovery Position

1



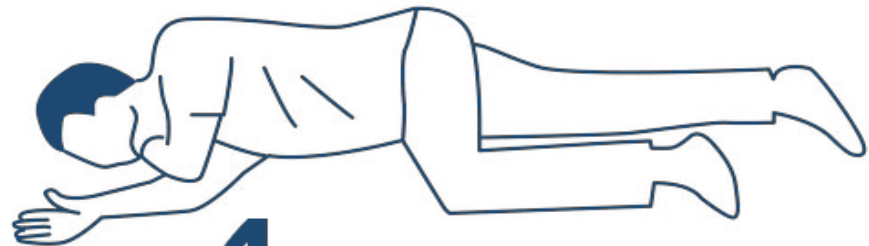
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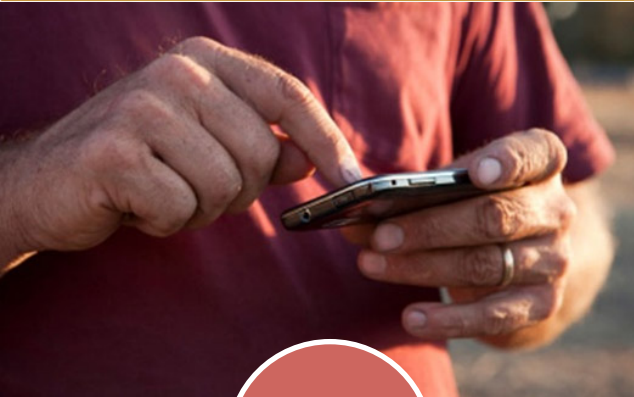
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# When an Overdose Happens



1

Call  
**911**



2

Rescue  
breathing



3

Administer  
naloxone

# Naloxone

- Naloxone (Narcan) will reverse the effects of opioids, reversing an overdose.
- Simple nasal spray or injectable
- No effect other than blocking the opioids
- No adverse reactions
- No potential for abuse
- No potential for overdose



# Naloxone Formulations



Nasal with  
separate  
atomizer  
“Multi-step”

Amphastar Pharmaceuticals



Narcan Nasal  
Spray  
“Single-Step”

Adapt Pharma



Auto-injector

Kaleo Inc.



Intramuscular  
Injection

Various Companies

# Naloxone

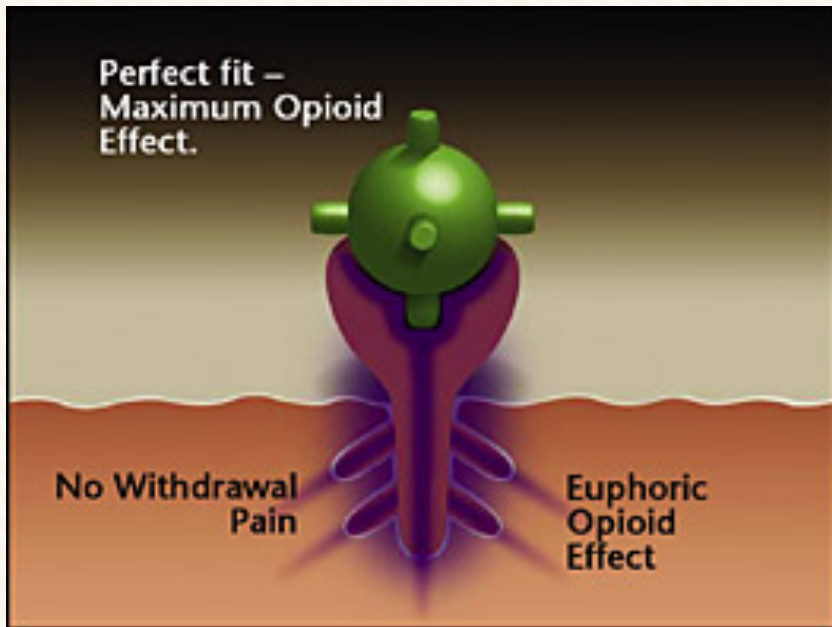
- A prescription medicine that reverses an opioid overdose, but may cause withdrawal
- Injectable and intranasal applications
- Wakes a person who is overdosing in 3-5 minutes and lasts 30-90 minutes
- Does not have psychoactive effects – does not make a person “high”

# Naloxone

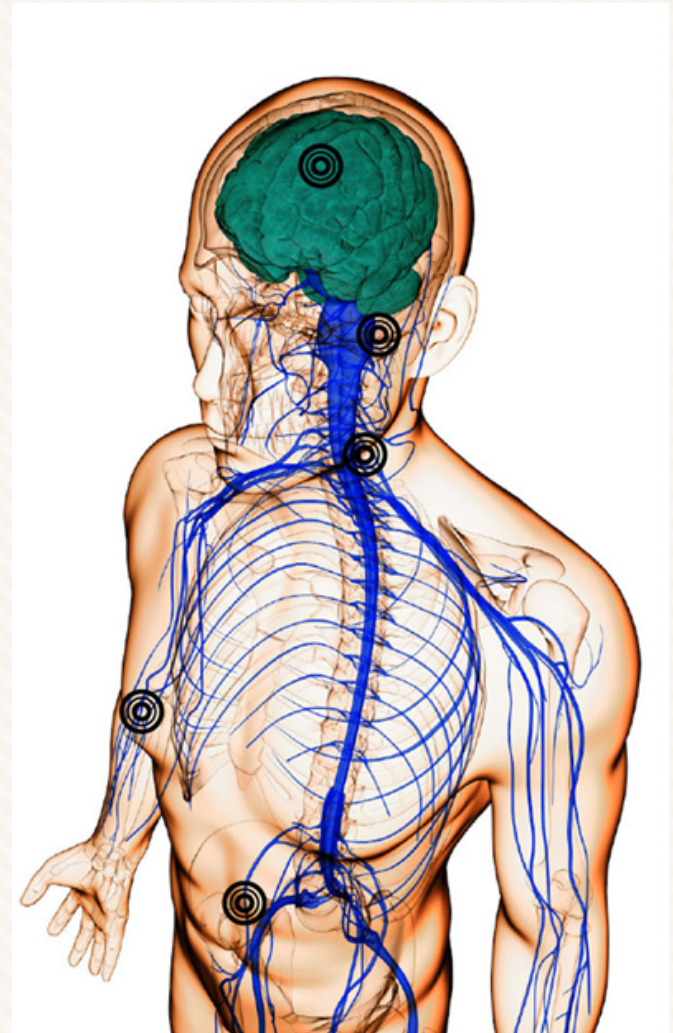
- Cannot cause harm, even if the person is not overdosing
- Used routinely by EMS & Emergency Rooms
- Available in most pharmacies



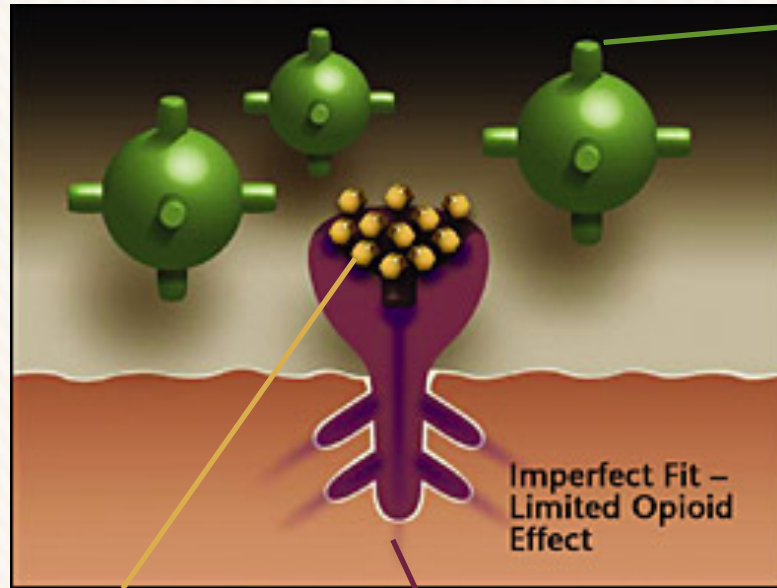
# Opioid Receptors in the Brain:



Opiates fit perfectly in opioid receptors throughout the brain, especially in the areas that regulate breathing and so a person stops breathing and lack of oxygen leads to death.



# Opioids

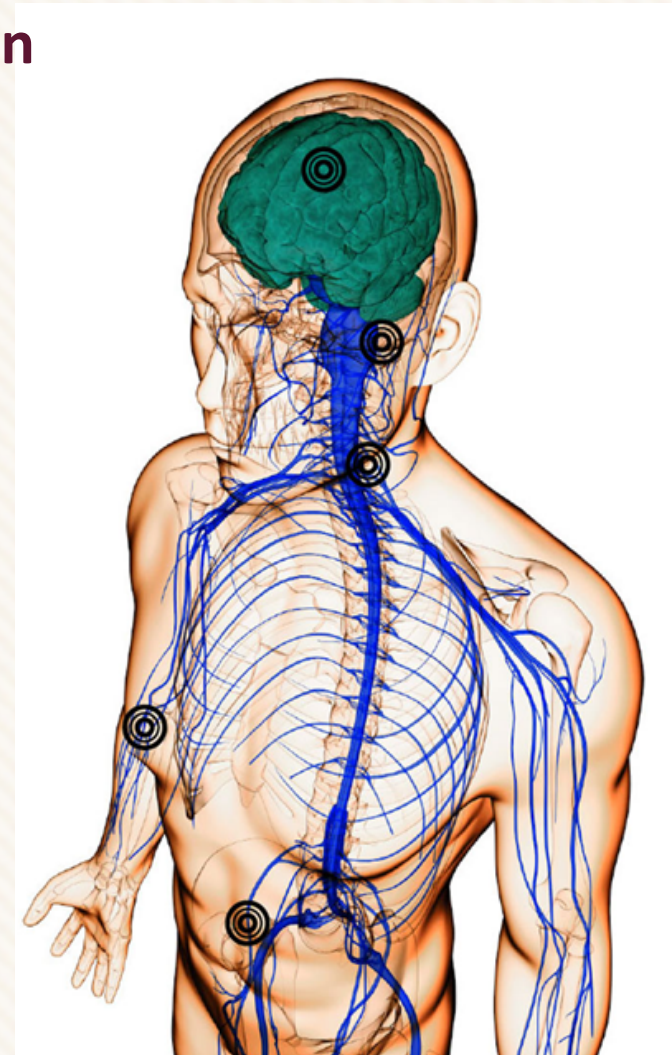


Heroin

**naloxone**

**opioid receptor**

Naloxone has a stronger affinity to the opioid receptors than the heroin, so it knocks the heroin off the receptors for a short time and lets the person breathe again.





# Naloxone Facts

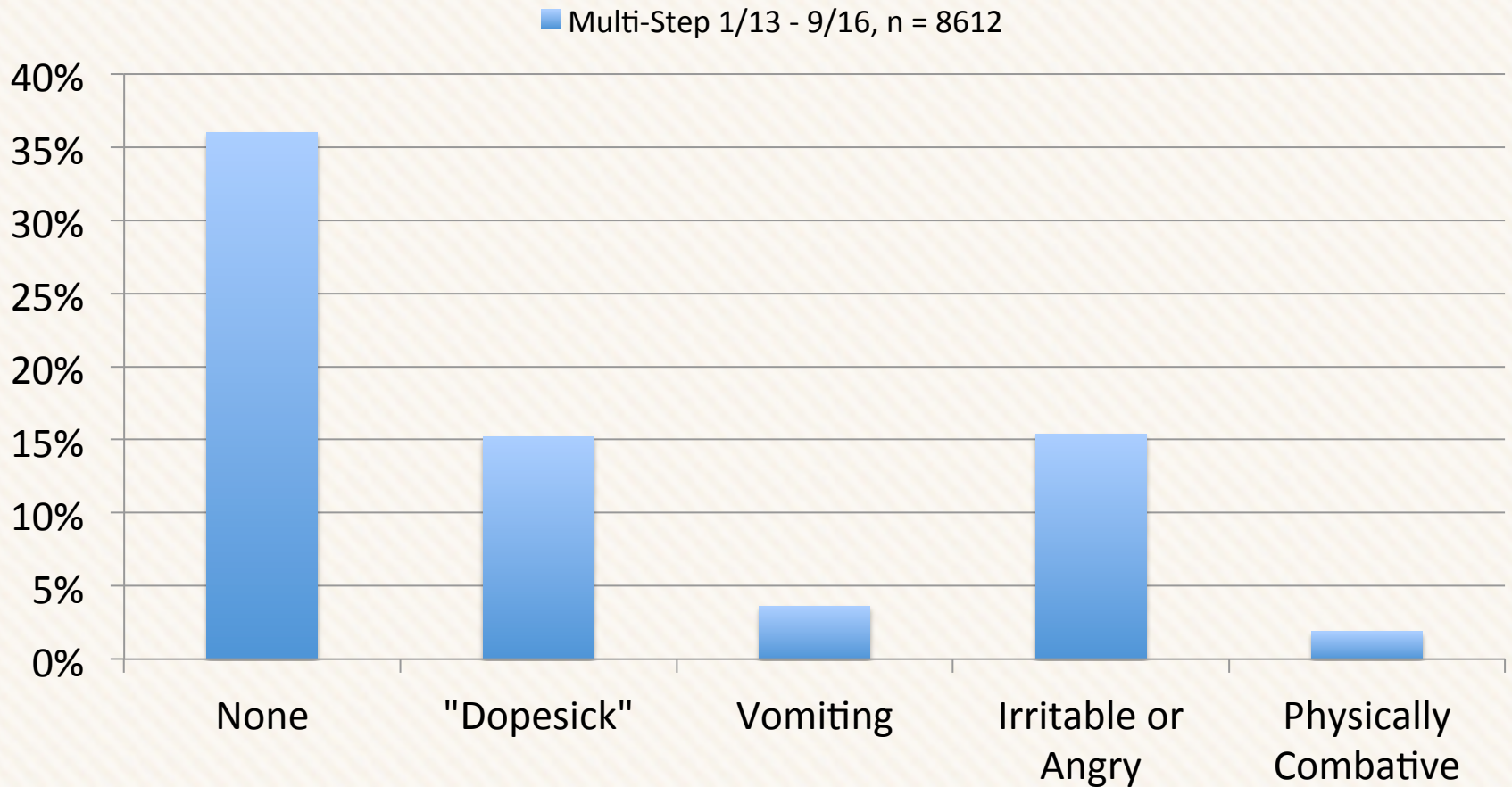
- Naloxone is a short-acting emergency response medication
- Its effects can last from 30-90 minutes
- After 90 minutes, effects of opioid may return depending on the opioid and if there is enough drug still in the bloodstream
- Reassure person experiencing the overdose that they may experience withdrawal symptoms
- Advise against using more opioid since adding more opioid would be extremely dangerous increase the risk for re-overdose



# How People Respond to Naloxone

- Most awaken slowly after 2 doses, some require more, especially if there is fentanyl on board
- Most often people feel very confused, embarrassed-tell them that they have had an overdose; they were given naloxone and the ambulance is coming
- Sometimes people may experience mild to moderate withdrawal symptoms
- Rarely people will feel severe withdrawal symptoms
- Reassure them that withdrawal symptoms will diminish as the naloxone wears off

# Community Bystander Naloxone Rescue Reports: Post-Naloxone Withdrawal Symptoms, 1/13 – 9/16



\*More than one post-naloxone withdrawal symptom can be reported per overdose

# Timing Is Everything:

## The Duration of Naloxone and the Opioid

Drug	Duration	Naloxone wears off in...
Methadone	24-32 hours	30-90 mins
Heroin	6-8 hours	30-90 mins
Oxycontin	3-6 hours	30-90 mins
Codeine	3-4 hours	30-90 mins
Demerol	2-4 hours	30-90 mins
Morphine	3-6 hours	30-90 mins
Fentanyl	2-4 hours	30-90 mins



# Getting Naloxone at the Pharmacy

- Many pharmacies have a standing order for naloxone
- Many have the single-step or multi-step nasal naloxone
- Not all pharmacies are equally prepared to fill the prescription

# Good Samaritan Law

The Missouri Good Samaritan Law protects victims and those who call 9-1-1 for help from charge, prosecution and conviction for possession or use of controlled substances.





# Critical Information

Missouri Substance Abuse Helpline

1-800-575-7480

<https://dmh.mo.gov/ada/prescription-drug-misuse.html>



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[www.labor.mo.gov/opioids](http://www.labor.mo.gov/opioids)

573-751-3403

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